



Invest in Your Bones Bone Mineral Calcium and Vitamin D Leaflet 4

One common misconception is that calcium is only needed for growing children. In reality, both calcium and vitamin D are needed to maintain healthy, strong bones during life. Until age 35, the daily calcium deposits of bone prevent the withdrawal of calcium from your bones. Vitamin D promotes the absorption of calcium in the gut, which is necessary during later years. To make sure that your bones are not weakening because of a lack of calcium, eat a balanced diet that is rich in calcium.

Your body cannot make its own calcium. It must be supplied by eating calcium-rich foods. Men and women under 50 years of age need 1,000 milligrams (mg.) of calcium and 400–800 International Units (IU) of Vitamin D₃ daily. Over 50 years of age, you need 1,200 mg. of calcium and 800–1000 IU of vitamin D₃ (National Osteoporosis Foundation). When available, choose a supplement of vitamin D₃ (cholecalciferol) over vitamin D₂ (ergocalciferol) to protect bone health. Read dietary supplement labels to help you make the best choice. If you avoid milk products, ask your physician about taking calcium and/or vitamin D₃ supplements.

Dietary Calcium

Here's how to add calcium to your dietary choices from primary and secondary sources.

- **Primary** calcium sources are milk, yogurt, and cheese. The calcium content of low-fat-milk products (milk, cheese, and yogurt) is equal to full-fat foods, so don't worry about losing out on this bone-strengthening mineral. Beware: if you don't drink milk, it is very difficult to get enough calcium from other foods.
- **Secondary** calcium sources are meats, poultry, fish, dry beans, eggs, and nuts. Sardines and salmon with bones, oysters, kidney beans, and tofu made with calcium salt are examples that contribute calcium. Other foods contribute even less calcium. Most vegetables and fruits are poor sources of calcium, but some deep leafy greens (broccoli) and calcium-fortified fruit juices contain moderate amounts of calcium. Breads, cereals, and pastas contribute very little calcium in daily meal choices. In fact, milk and baking powder used to make these foods give them small amounts of calcium.

Dietary Vitamin D

To ensure you get enough Vitamin D, eat fish, eggs, fortified milk, cod liver oil, and plants that can synthesize D₂. The sun also adds significantly to the daily vitamin D₃ production. As little as 10 minutes of exposure is thought to be enough to prevent deficiencies.

Lactose Intolerance

Some people are lactose intolerant, which means they have difficulty digesting milk products. People who are lactose intolerant can satisfy their need for calcium in a number of ways by including nondairy, calcium-rich food choices; taking calcium supplements; using lactase pills or drops that make milk products digestible; and purchasing lactose-reduced milk.

Call the [National Osteoporosis Foundation](http://www.nof.org/prevention/calcium2.htm) at (800) 223-9994 for more facts about your calcium and vitamin D, or see their website at: <http://www.nof.org/prevention/calcium2.htm>.

For additional information, contact your local county AgriLife Extension agent – Family and Consumer Sciences. Resources: Mary Kinney Bielamowicz, Ph.D., R.D., L.D., Regents Fellow, Professor & Extension Nutrition Specialist; and Sharon Francey Robinson, Ph.D., R.D., Associate Professor & Extension Nutrition Specialist; Nutrition & Food Science Department, Texas AgriLife Extension Service, Texas A&M System, College Station, Texas.